AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) A machine-implemented process for discovering a path for

2   transferring at least one data packet from a source node to a destination node through a plurality

of nodes linked together to form a network, the procedure comprising the unordered steps of:

4   (a)   sending, from the source node to ~~at least~~ a first randomly-selected one of the

plurality of network nodes, a first feeler packet including first feeler data identifying the

6   destination node and node transit log data identifying the source node;

(b)   independently from the first sending step (a), sending, from the destination node

8   to ~~at least~~ a second randomly-selected one of the plurality of network nodes, a second feeler

packet including second feeler data identifying a network node and node transit log data

10   identifying the destination node; and

(c)   in response to the receipt ~~of a first feeler packet~~ at a first receiving node of a first

12   received feeler packet having node transit log data identifying the source node;

(c.1)   augmenting the node transit log in the first received feeler packet with data

14   identifying the first receiving node to form an augmented first received feeler packet,

(c.2)   ~~identifying~~ seeking, in the first receiving node, a record of a second received

16   feeler packet having node transit log data identifying the destination node, and

(c.2.1) ~~when~~ if the second received feeler packet is found, combining the node

18   transit log data from the first and second received feeler packets to represent a

path discovered for transferring at least one data packet from the source node to

20   the destination node through the network, otherwise

(c.2.2) sending a copy of the augmented first received feeler packet to a second ~~of~~

22   ~~the plurality of network nodes~~ randomly-selected receiving node.

2.   (Original)   The process of claim 1 further comprising the step of:

2   (d)   sending, to the source node, a copy of the combined node transit log data

representing the discovered path.

3. (Currently Amended) The process of claim 2 further comprising the steps of:

(e) storing data representing the discovered path at the source node; and

(f) repeating the feeler packet sending step (a) in response to <u>a measure of</u> the age of the stored path data.

4. (Original) The process of claim 2 further comprising the steps of:

(e) storing data representing the discovered path at the source node; and

(f) repeating the feeler packet sending step (a) in response to a measure of the demand at the source node for a path to the destination node.

5. (Original) The process of claim 2 further comprising the steps of:

(e) storing data representing the discovered path at the source node; and

(f) repeating the feeler packet sending step (a) in response to a measure of the cost of the path represented by the stored path data.

6. (Currently Amended) The process of claim 1 wherein the identifying step (c.2) comprises the step of:

~~identifying~~ seeking, in the first receiving node, <u>a record of</u> a second received feeler packet having node transit log data identifying the destination node as the <u>second received</u> feeler packet originating node.

7. (Original) The process of claim 6 further comprising the steps of:

(d) sending, to the source node, a copy of the combined the node transit log data representing the discovered path;

(e) storing data representing the discovered path at the source node; and

(f) repeating the feeler packet sending step (a) in response to the age of the stored path data.

8.   (Original)   The process of claim 6 further comprising the steps of:

(d)   sending, to the source node, a copy of the combined the node transit log data representing the discovered path;

(e)   storing data representing the discovered path at the source node; and

(f)   repeating the feeler packet sending step (a) in response to a measure of the demand at the source node for a path to the destination node.

9.   (Original)   The process of claim 6 further comprising the steps of:

(d)   sending, to the source node, a copy of the combined the node transit log data representing the discovered path;

(e)   storing data representing the discovered path at the source node; and

(f)   repeating the feeler packet sending step (a) in response to a measure of the cost of the path represented by the stored path data.

10.   (Original)   The process of claim 1 wherein the combining step (c.2.1) further comprises the step of:

(c.2.1.1)   revising the node transit log data from the first and second received feeler packets to eliminate loops from the discovered path.

11.   (Currently Amended) A network apparatus for discovering a path for transferring at least one data packet (114) from a source node (68) to a destination node (70) through a plurality of nodes (50, 52, 58, 62) linked together to form a network (34), the apparatus comprising:

means (76, 78, 80, 86) for sending, from the source node (68) to at least a first randomly-selected one (50) of the plurality of network nodes, a first feeler packet (122) including first feeler data (126) identifying the destination node (70) and node transit log data (128) identifying the source node (68);

means (76, 78, 80, 86) for sending, from the destination node (70) to at least a second randomly-selected one (52) of the plurality of network nodes, a second feeler packet (122)

including second feeler data (126) identifying a network node (52) and node transit log data

12   (128) identifying the destination node (70), independently of the first feeler packet;

       means (94, 96, 98), ~~in response~~ responsive to the receipt at a first receiving node (50) of a

14   first received feeler packet (122) ~~at a first receiving node (50)~~ having node transit log data

identifying the source node, for augmenting the node transit log (128) in the first received feeler

16   packet (122) with data identifying the first receiving node (50) to form an augmented first

received feeler packet (122);

18   means (94, 96, 98, 102) for sending a copy of the augmented feeler packet (122) from the

first receiving node (50) to a second randomly-selected receiving node (58) ~~of the plurality of~~

20   ~~network nodes~~;

       means (94, 96, 98) for ~~identifying~~ seeking, in the first receiving node (50), a record of a

22   second received feeler packet (122) having node transit log data (130) identifying the destination

node (70); and

24   means (94, 96, 98), ~~in response~~ responsive to finding the second received feeler packet

(122) at the first receiving node (50), for combining the node transit log data from the first and

26   second received feeler packets to represent a path (72) discovered for transferring at least one

data packet (114) from the source node (68) to the destination node (70) through the network

28   (34).

       12.   (Original)   The apparatus of claim 11 further comprising:

2   means (94, 96, 98, 132) for sending, to the source node (68), a copy of the combined

node transit log data (140) representing the discovered path (72).

       13.   (Currently Amended) The apparatus of claim 12 further comprising:

2   means (78, 80) for storing data (140) representing the discovered path (72) at the source

node (68); and

4   means (76, 78, 80, 86) for re-sending the first feeler packet (122) from the source node

(68) in response to a measure of the age of the stored path data (92).

14. (Currently Amended) The apparatus of claim 12 further comprising:

means (78, 80) for storing data (140) representing the discovered path (72) at the source node (68); and

means (76, 78, 80, 86) for re-sending the first feeler packet (122) from the source node (68) in response to a measure of the demand at the source node (68) for a path to the destination node (70).

15. (Currently Amended) The apparatus of claim 12 further comprising:

means (78, 80) for storing data (140) representing the discovered path (72) at the source node (68); and

means (76, 78, 80, 86) for re-sending the first feeler packet (122) from the source node (68) in response to a measure of the cost of the path (72) represented by the stored path data (92).

16. (Currently Amended) The apparatus of claim 11 further comprising:

means (94, 96, 98) for ~~identifying~~ seeking, in the first receiving node (50), a record of a second received feeler packet (122) having node transit log data (140) identifying the destination node (70) as the second received feeler packet originating node (130).

17. (Currently Amended) The apparatus of claim 16 further comprising:

means (94, 96, 98, 132) for sending, to the source node (68), a copy of the combined the node transit log data (140) representing the discovered path (72);

means (78, 80) for storing data (140) representing the discovered path (72) at the source node (68); and

means (76, 78, 80, 86) for re-sending the first feeler packet (122) from the source node (68) in response to a measure of the age of the stored path data (92).

18. (Currently Amended) The apparatus of claim 16 further comprising:

means (94, 96, 98, 132) for sending, to the source node (68), a copy of the combined the node transit log data (140) representing the discovered path (72);

4   means (78, 80) for storing data (140) representing the discovered path (72) at the source node (68); and

6   means (76, 78, 80, 86) for re-sending the <u>first</u> feeler packet (122) from the source node (68) in response to a measure of the demand at the source node (68) for a path to the destination

8   node (70).

        19.   (Currently Amended) The apparatus of claim 16 further comprising:

2   means (94, 96, 98, 132) for sending, to the source node (68), a copy of the combined the node transit log data (140) representing the discovered path (72);

4   means (78, 80) for storing data (140) representing the discovered path (72) at the source node (68); and

6   means (76, 78, 80, 86) for re-sending the <u>first</u> feeler packet (122) from the source node (68) in response to a measure of the cost of the path (72) represented by the stored path data (92).

        20.   (Original)   The apparatus of claim 11 further comprising:

2   means (94, 96, 98) for revising the combined node transit log data (140) from the first and second received feeler packets to eliminate loops from the discovered path (72).

        21.   (Currently Amended) A computer program product for use in a system for

2   discovering a path for transferring one or more data packets from a source node to a destination node through a plurality of nodes linked together to form a network, the computer program

4   product comprising:

        a recording medium;

6   means recorded on the recording medium for directing the system to send, from the source node to <s>at least</s> a first <u>randomly-selected</u> one of the plurality of network nodes, a <u>first</u>

8   feeler packet including <u>first</u> feeler data identifying the destination node and node transit log data identifying the source node;

10   means recorded on the recording medium for directing the system to send, from the destination node to <s>at least</s> a second <u>randomly-selected</u> one of the plurality of network nodes, a

12 second feeler packet including <u>second feeler data identifying a network node and</u> node transit log
data identifying the destination node<u>, independently of the first feeler packet</u>;

14   means recorded on the recording medium for directing the system to augment, in
response to the receipt <u>at a first receiving node</u> of a first <u>received</u> feeler packet ~~at a first receiving~~

16 ~~node~~ <u>having node transit log data identifying the source node</u>, the node transit log in the first
received feeler packet with data identifying the first receiving node to form an augmented first

18 feeler packet;

means recorded on the recording medium for directing the system to send a copy of the

20 augmented feeler packet from the first receiving node to a second <u>randomly-selected receiving</u>
<u>node;</u> ~~of the plurality of network nodes;~~

22   means recorded on the recording medium for directing the system to ~~identify~~ <u>seek</u> in the
first receiving node ~~for~~ <u>a record of</u> a second received feeler packet having node transit log data

24 identifying the destination node; and

means recorded on the recording medium for directing the system to combine, in

26 response to finding the <u>record of a</u> second received feeler packet at the first receiving node, the
node transit log data from the first and second received feeler packets to represent a path

28 discovered for transferring at least one data packet from the source node to the destination node
through the network.

22.   (Original)   The computer program product of claim 21 further comprising:

2   means recorded on the recording medium for directing the system to send, to the source
node, a copy of the combined the node transit log data representing the discovered path.

23.   (Currently Amended) The computer program product of claim 22 further

2   comprising the steps of:

means recorded on the recording medium for directing the system to store data

4   representing the discovered path at the source node; and

means recorded on the recording medium for directing the system to resend the <u>first</u>

6   feeler packet in response to <u>a measure of</u> the age of the stored path data.

24.   (Currently Amended) The computer program product of claim 22 further comprising the steps of:

means recorded on the recording medium for directing the system to store data representing the discovered path at the source node; and

means recorded on the recording medium for directing the system to resend the <u>first</u> feeler packet in response to a measure of the demand at the source node for a path to the destination node.

25.   (Currently Amended) The computer program product of claim 22 further comprising the steps of:

means recorded on the recording medium for directing the system to store data representing the discovered path at the source node; and

means recorded on the recording medium for directing the system to resend the <u>first</u> feeler packet in response to a measure of the cost of the path represented by the stored path data.

26.   (Currently Amended) The computer program product of claim 21 further comprising:

means recorded on the recording medium for directing the system to ~~identify~~ <u>seek</u> in the first receiving node ~~for~~ <u>a record of</u> a second received feeler packet having node transit log data identifying the destination node as the <u>second received</u> feeler packet originating node.

27.   (Currently Amended) The computer program product of claim 26 further comprising the steps of:

means recorded on the recording medium for directing the system to send, to the source node, a copy of the combined the node transit log data representing the discovered path;

means recorded on the recording medium for directing the system to store data representing the discovered path at the source node; and

means recorded on the recording medium for directing the system to resend the <u>first</u> feeler packet in response to <u>a measure of</u> the age of the stored path data.

28.   (Currently Amended) The computer program product of claim 26 further
comprising the steps of:

means recorded on the recording medium for directing the system to send, to the source
node, a copy of the combined the node transit log data representing the discovered path.

means recorded on the recording medium for directing the system to store data
representing the discovered path at the source node; and

means recorded on the recording medium for directing the system to resend the <u>first</u>
feeler packet in response to a measure of the demand at the source node for a path to the
destination node.

29.   (Currently Amended) The computer program product of claim 26 further
comprising the steps of:

means recorded on the recording medium for directing the system to send, to the source
node, a copy of the combined the node transit log data representing the discovered path;

means recorded on the recording medium for directing the system to store data
representing the discovered path at the source node; and

means recorded on the recording medium for directing the system to resend the <u>first</u>
feeler packet in response to a measure of the cost of the path represented by the stored path data.

30.   (Original)   The computer program product of claim 21 further comprising:

means recorded on the recording medium for directing the system to revise the node
transit log data from the first and second received feeler packets to eliminate loops from the
discovered path.